

AMENDMENT TO THE CLAIMS

Please enter the following amendments to the claims without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents as follows:

Please cancel claims 2, 6, 7, 17, 18 and 22 to 27 without prejudice.

1. (Currently Amended) A method of increasing the ability of an adenovirus to transduce a specific cell type relative to an unmodified adenovirus, comprising the step of: modifying a gene encoding an adenoviral capsid protein by introducing a DNA sequence encoding a single chain antibody into either the 5' end of the minor capsid protein pIIIa gene or the 3' end of the minor capsid protein pIX gene, wherein said modification increases the ability of said adenovirus to transduce a specific cell type relative to an unmodified adenovirus.

2. (Cancelled)

3. (Currently Amended) The method of claim 2 ~~1~~, wherein said single chain antibody is directed towards a protein, wherein said protein is specific to a cell type.

4. (Original) The method of claim 3, wherein said cell type is a tumor cell.

5. (Original) The method of claim 3, wherein said protein is a cell-surface protein.

6-7. (Cancelled)

8. (Original) The method of claim 1, wherein said modified capsid protein retains its native display profile.

9. (Currently Amended) The method of claim 1, wherein said adenovirus exhibits coxsackie adenovirus receptor (CAR)-independent gene transfer.

10. (Original) The method of claim 1, wherein said adenovirus further comprises an additional modification to an adenovirus fiber knob, wherein said modification to said fiber knob ablates the native tropism of said adenovirus.

11. (Original) The method of claim 1, wherein the adenoviral vector encoding said adenovirus further comprises a therapeutic gene.

12. (Currently Amended) A method of killing tumor cells in an individual, said method comprising the steps of: ~~administering to said individual~~ injecting directly to said tumor cells an effective amount of recombinant adenoviruses comprising a therapeutic gene that converts a non-toxic compound to a toxic compound and a gene encoding ~~an adenoviral capsid~~

~~protein~~ a pIIIa protein or a pIX protein modified by introducing a single chain antibody into said ~~protein~~ the N-terminus of said pIIIa protein or the C-terminus of said pIX protein; and treating said individual with said non-toxic compound.

13. (Original) The method of claim 12, wherein said therapeutic gene is herpes simplex virus-thymidine kinase gene and said non-toxic compound is ganciclovir.

14. (Original) The method of claim 12, wherein said single chain antibody is directed towards a protein specific to a cell type.

15. (Original) The method of claim 14, wherein said cell type is a tumor cell.

16. (Original) The method of claim 14, wherein said protein is a cell-surface protein.

17-18. (Cancelled)

19. (Original) The method of claim 12, wherein said modified capsid protein retains its native display profile.

20. (Currently Amended) The method of claim 12, wherein said adenovirus exhibits coxsackie adenovirus receptor (CAR)-independent gene transfer.

21. (Original) The method of claim 12, wherein said adenovirus further comprises an additional modification to an adenovirus fiber knob, wherein said modification to said fiber knob ablates the native tropism of said adenovirus.

22-27. (Cancelled)

Please add the following new claims:

28. (New) A method of killing a tumor in an individual, said method comprising the steps of: injecting directly to said tumor an effective amount of recombinant adenoviruses comprising a therapeutic gene that converts a non-toxic compound to a toxic compound and a gene encoding a pIIIa protein or a pIX protein modified by introducing a single chain antibody into the N-terminus of said pIIIa protein or the C-terminus of said pIX protein; and treating said individual with said non-toxic compound.

29. (New) The method of claim 28, wherein said therapeutic gene is herpes simplex virus-thymidine kinase gene and said non-toxic compound is ganciclovir.

30. (New) The method of claim 28, wherein said single chain antibody is directed towards a protein specific to a cell type.

31. (New) The method of claim 30, wherein said cell type is a tumor cell.

32. (New) The method of claim 30, wherein said protein is a cell-surface protein.
33. (New) The method of claim 28, wherein said modified capsid protein retains its native display profile.
34. (New) The method of claim 28, wherein said adenovirus exhibits coxsackie adenovirus receptor (CAR)-independent gene transfer.
35. (New) The method of claim 28, wherein said adenovirus further comprises an additional modification to an adenovirus fiber knob, wherein said modification to said fiber knob ablates the native tropism of said adenovirus.